



BSE PRODUCER UPDATE

Bovine Spongiform Encephalopathy (BSE)

BSE, widely known as "Mad Cow Disease", is a fatal disease of cattle first recognized in the United Kingdom (UK) in 1986. Most research suggests an abnormal protein, known as a prion, causes BSE. Scientific evidence shows the same disease agent that causes BSE in cattle also causes the new human disease, variant Creutzfeldt-Jakob disease.

BSE spreads in cattle primarily through animal feed containing processed ruminant products. Cattle infected with BSE take 2 to 8 years before showing signs of disease, which include changes in temperament, such as nervousness or aggressiveness, and progressive incoordination.

BSE Found in the US

On December 23, 2003 the United States Department of Agriculture (USDA) announced that a case of BSE had been diagnosed in a dairy cow from a herd in Washington. The cow was born in a herd in Alberta, Canada and was one of 81 animals from that herd imported into the US. The Washington herd has been depopulated and the investigation completed.

Enhanced BSE Surveillance Plan Announced

The USDA requested an international panel of experts to review their response to the BSE case in Washington. One of the panel's recommendations was an enhanced BSE surveillance program. On March 15, 2004 the USDA announced a new BSE surveillance plan based on these recommendations.

The plan is to collect samples of brain tissue from as many "high-risk" cattle as possible for 12-18 months AND to obtain a random sample from apparently healthy aged cattle at slaughter. Samples will be collected based on the distribution of cattle in the US. This surveillance will determine if BSE exists in the national herd, and, if so, estimate the prevalence of disease in the US adult cattle population.

The plan targets cattle classified as "high-risk" because these animals are most likely to have BSE. The total number of these "high-risk" cattle in the US is estimated at 446,000 each year. The USDA has set the collection target at 268,000 - the number of samples that could detect BSE at a rate of 1 positive in 10 million adult cattle with a 99% confidence level. This program would detect BSE if there were only 5 positive animals in the entire country!

In addition to sampling "high-risk" cattle, USDA will also collect random samples from apparently healthy aged cattle at the top 40 slaughter facilities across the country. These cattle are included because BSE is a disease of older cattle with a typical incubation period of 2-8 years.

Surveillance for BSE in California

Surveillance for BSE began in 1990. California collected 560 samples in 2001 and approximately 2,000 in 2002 and in 2003. The US sampled 20,543 cattle in 2003 - a sample size designed to detect BSE if it occurred in 1 animal per million adult cattle with a 95% confidence rate. This sample size is more than 47 times the international standard for countries with a "low risk" of BSE.

California is working with the USDA and the cattle industry to determine the best way to enhance BSE surveillance and test as many "high-risk" cattle as possible for 12-18 months. Brain samples will be collected from cattle over 30 months of age that are:

- ◆ Non-ambulatory (cannot rise or cannot walk)
- ◆ Showing neurological signs
- ◆ Condemned, euthanized or died following signs that may be associated with BSE
- ◆ Dead from unknown cause.

In addition, a random sample of apparently healthy aged cattle will be sampled at California slaughter facilities.

Sample Tests

There are no tests that detect BSE in live animals. Current tests look for the abnormal prion protein in the brain. Two rapid screening tests have recently been licensed for use in the US; Bio-Rad Laboratories rapid TeSeE® test and Idexx HerdChek(R) BSE Antigen Test Kit.

Sensitive screening tests may give false positive results - samples positive to these BSE screening tests will be sent for further confirmatory testing at the national reference laboratory.

BSE Surveillance in Other Countries

In 2002, the UK tested nearly 400,000 samples, with over 1,000 positive for BSE. However, all cattle over 30 months of age in the UK are purchased and do not enter any food chain; only some of these cattle are tested. During the same time period, over 10 million samples were tested from the other European Union Member States, and over 1,000 were positive for BSE. In Japan, during the same period of time, over 1 million cattle were tested (all slaughtered cattle) and 2 were positive for BSE.

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